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October 31, 2012

VIA ELECTRONIC SUBMISSION

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Progeny LMS, LLC & Landis+Gyr Company
Request for Confidential Treatment
Part 15 Joint Test Report
WT Docket No. 11-49

Dear Ms. Dortch:

Progeny LMS, LLC ("Progeny") and Landis+Gyr Company ("Landis+Gyr"), each by its counsel and pursuant to Sections 0.457 and 0.459 of the Commission's Rules, 47 C.F.R. §§ 0.457, 0.459, hereby requests that the redacted portions of the attached Part 15 Joint Test Report be treated as confidential and be withheld from public inspection. For convenience, Progeny and Landis+Gyr are providing one copy of the Joint Test Report in unredacted form (with the redacted portions highlighted in green), and one copy with the redactions, that could be made available for public inspection.

Pursuant to Section 90.353(d) of the Commission's rules[1] and paragraph 29 of the Commission's *Waiver Order*,[2] Progeny is required to demonstrate that its Multilateration Location and Monitoring Service ("M-LMS") network does not cause unacceptable levels of interference to Part 15 devices. On January 27, 2012, Progeny filed with the Commission the results of testing that were conducted in 2011 on behalf of Progeny by an independent third party testing firm, Spectrum Management Consulting Inc. ("SMC").[3]

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[1] *See* 47 C.F.R. § 90.353(d).

[2] *See* Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules, *Order*, DA 11-2036, ¶ 29 (Dec. 20, 2011) ("*Waiver Order*") (granting conditional waivers of Sections 90.155(e) and 90.353(g) of the Commission's rules).

[3] *See Coexistence of M-LMS Network and Part 15 Devices*, Spectrum Management Consulting Inc. (Jan. 27, 2012) ("*Part 15 Field Test Report*") (included as an attachment to *Letter from Bruce A. Olcott, Counsel to Progeny LMS, LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission*, WT Docket No. 11-49 (Jan. 27, 2012) ("*Progeny Part 15 Field Test Report Filing*").

At the request of the Commission, Progeny subsequently agreed to additional testing on a joint basis with three entities, Itron, Inc. ("Itron"); Landis+Gyr; and the Wireless Internet Service Providers Association ("WISPA"). The attached report addresses the tests that were conducted with Landis+Gyr. The report includes details about the equipment employed in the tests, the test configurations, the noise environment at the test sites, and the test results. Because certain operating characteristics of the Landis+Gyr equipment constitute commercial trade secrets, Landis+Gyr and Progeny hereby jointly request confidential treatment for the redacted contents of the attached report. In support of this request, and in accordance with the requirements of Section 0.459(b) of the Commission's rules, 47 C.F.R. § 0.459(b), Progeny and Landis+Gyr submit the following:

0.459(b)(1): Progeny and Landis+Gyr seek confidential treatment for the redacted portions of the attached Part 15 Joint Test Report which constitute those sections describing the operating capabilities of the Landis+Gyr equipment employed in the tests.

0.459(b)(2): Progeny and Landis+Gyr are filing this Part 15 Joint Test Report in WT Docket Number 11-49 at the request of the Commission staff and in furtherance of the requirement that Progeny must demonstrate that its M-LMS network does not cause unacceptable levels of interference to Part 15 devices.

0.459(b)(3): The redacted materials contained in the Part 15 Joint Test Report contain highly sensitive, confidential, and proprietary commercial and technical information, including trade secrets regarding the operation of Landis+Gyr's automatic meter reading ("AMR") devices. Specifically, the redacted portions of the attached Part 15 Joint Test Report provide raw data from the tests which details the functioning and capabilities of Landis+Gyr's AMR equipment, including the throughput of Landis+Gyr equipment that enables its AMR devices to operate successfully in the 902-928 MHz band. Landis+Gyr treats such information as highly confidential and does not disclose it to third parties without a prior agreement as to confidentiality of such information. In fact, Landis+Gyr required Progeny to enter into a Nondisclosure Agreement ("NDA") prior to gaining access to the technology and information. As such, the redacted information in the Part 15 Joint Test Report qualifies as material that "would customarily be guarded from competitors" within the meaning of Section 0.457(d)(2) of the Commission's rules. In addition, the redacted portions of the Part 15 Joint Test Report would be protected from disclosure under the Freedom of Information Act ("FOIA") as "trade secrets and commercial or financial information obtained from a person and privileged or confidential." 5 U.S.C.A. § 552(b)(4).

0.459(b)(4): The redacted portion of the Part 15 Joint Test Report contains trade secrets and confidential information regarding the operation of Landis+Gyr's AMR networks and devices. The market for AMR equipment is highly competitive and Landis+Gyr must protect its trade secrets in order to remain competitive with other providers of AMR equipment and services.

0.459(b)(5): Disclosure of the confidential information could compromise the ability of Landis+Gyr to compete successfully with other providers of AMR equipment and services in this highly competitive industry. As a result, the release of any portion of the redacted information could compromise Landis+Gyr's competitive edge in the AMR equipment industry, resulting in substantial competitive harm to Landis+Gyr.

0.459(b)(6): Landis+Gyr does not permit the dissemination of its confidential trade secrets and proprietary information regarding its AMR equipment and methodologies to non-employees without the execution of a confidentiality agreement. Furthermore, all such confidentiality agreements require third party recipients of the information to request confidential treatment of the information as a part of any submission of any portion of the information to government agencies, such as the Commission. The NDA that Landis+Gyr required Progeny to enter into included such a provision.

0.459(b)(7): The information contained in the attached Part 15 Joint Test Report is not available to the public and, to the best of the knowledge of Progeny and Landis+Gyr, has not been disseminated to non-Progeny or non-Landis+Gyr personnel without the execution of a confidentiality agreement.

0.459(b)(8): Progeny and Landis+Gyr request that the Commission permanently withhold the redacted information contained in the attached Part 15 Joint Test Report. Release of this information at any time in the future would cause substantial competitive harm to Landis+Gyr.

For the foregoing reasons, Progeny and Landis+Gyr respectfully request that the redacted portions of the Part 15 Joint Test Report be granted confidential status and be withheld from public inspection. If confidential treatment is not granted for all or any part of the attached Part 15 Joint Test Report, Progeny and Landis+Gyr request that all copies of the Part 15 Joint Test Report be returned to Progeny and Landis+Gyr.

The test results – i.e., the percentage changes in packet-rate success on the Landis+Gyr equipment when the Progeny beacons were turned on – are available for public inspection. Progeny and Landis+Gyr therefore believe that the public will not be prejudiced in any way in commenting on these tests by withholding access to the specific operating parameters of the Landis+Gyr equipment.

Please let us know if you have any questions.

Respectfully Submitted,

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JOINT LANDIS+GYR - PROGENY TESTING
AUGUST 7-8, 2012

10/26/2012

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1. Introduction

Personnel from both Landis+Gyr and Progeny completed a joint testing program on August 7 and 8, 2012 in the San Jose – Santa Clara area of California to document the effect, if any, of the Progeny M-LMS network on Landis+Gyr automated meter reading (AMR) equipment. Consistent with the general outlines of the test plans previously agreed, the groups completed system level tests of deployed equipment in multiple equipment configurations, in multiple locations and network environments. In addition to system level tests using deployed equipment, the group utilized spectrum analyzers, and other test equipment to fully characterize the RF environment at each test location.

This document describes the test environments and catalogs the joint test results that were obtained. This document does not assess the data obtained, draw any conclusions or make any recommendations from the data obtained.

2. Equipment types and configurations tested

Three principal equipment configurations were tested at each location appropriate to the type of test.

The primary pair of tests (see diagram 1 and 2) covered both the one way and two way equipment configurations, involved a Landis+Gyr receiver unit on a 25 foot mast communicating with a remotely located End Point (either one way or two way). The End Points were located approximately ¼ mile distant from the receiver unit, at a distance that provided an acceptable link in the absence of the Progeny network. Common distances and locations were used for the one way tests and the two way tests. The 25 foot mast height was chosen as most representative of Landis+Gyr deployed networks and the End Point distances were chosen as representative of the actual deployed distances used in similar interference or noise environments.

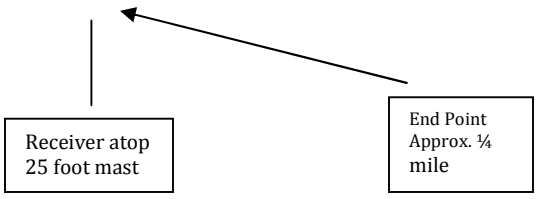


Diagram 1

The second test configuration (see diagram 2) involved only the Landis+Gyr receiver (with no associated End Points) on a 25 foot mast, along with a spectrum analyzer and test equipment, measuring the noise environment across 2.4 MHz centered around 917 MHz (the primary operating carrier for the one way AMR equipment) and 2.4 MHz centered around 911 MHz, which is also used by Landis+Gyr for its AMR equipment. This configuration measured and characterized the RF environment at each of the test sites, as well as testing the impact of a single M-LMS beacon at three different distances (50 meters, 1 mile, 5 miles), and was used to identify whether the operation of the Progeny network resulted in any increase in baseband noise in the spectrum surrounding 911 MHz and 917 MHz, as perceived by Landis+Gyr One way receiver, and which is spectrum utilized by the Landis+Gyr one way equipment under test

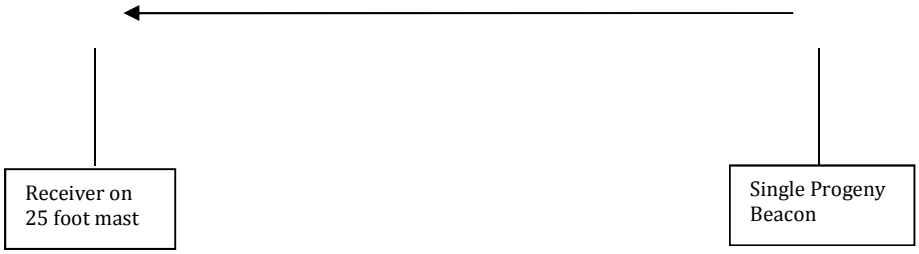


Diagram 2

3. Equipment channel and transmission frequency settings

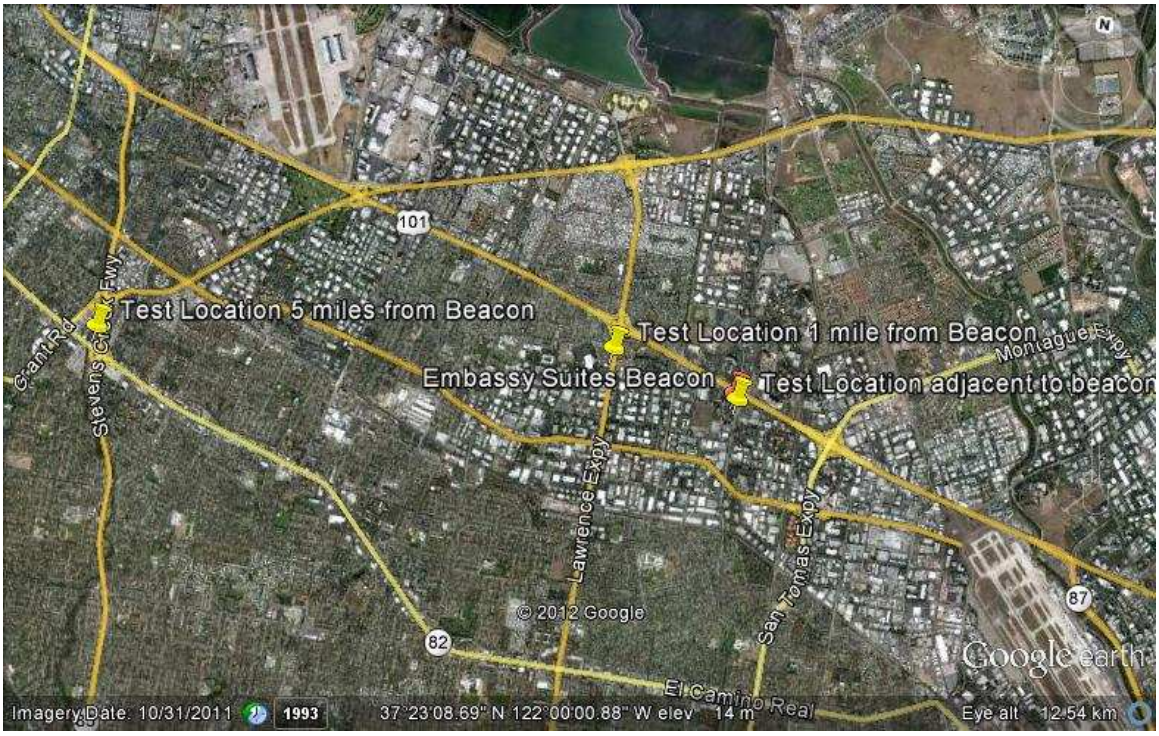
In the one way equipment tests, the End Point was programmed to send one packet every 5-second interval using equipment generating DSSS modulation with a center frequency around 917.4 MHz and a 2.4 MHz main lobe bandwidth. The length of each test was determined to ensure at least 300 packets were transmitted.

In the two way equipment tests, the End Point was programmed to generate and send one packet every 2 seconds, with transmissions spread on channels across the entire operating range from 904 to 928 MHz (including channels that were co-channel with the Progeny M-LMS beacon carriers). The length of the two way test was determined to ensure at least 500 packets were transmitted. Each two way test was conducted twice, once with a high-speed, large-bandwidth configuration (300 kHz spacing, 86 RF channels) and once with a low-speed, small-bandwidth configuration (100 kHz spacing, 240 RF channels).

4. Test Locations

4.1. Noise Environment Test Locations

Noise Environment Tests were conducted at three locations chosen to represent varying distances from a single Progeny beacon, in this case a beacon located at the Embassy Suites Santa Clara. The distances tested were adjacent to the beacon (50 meter separation), 1.06 miles and 4.94 miles distant. Noise Environment Tests are identified in Table 5 as Tests 13-26.



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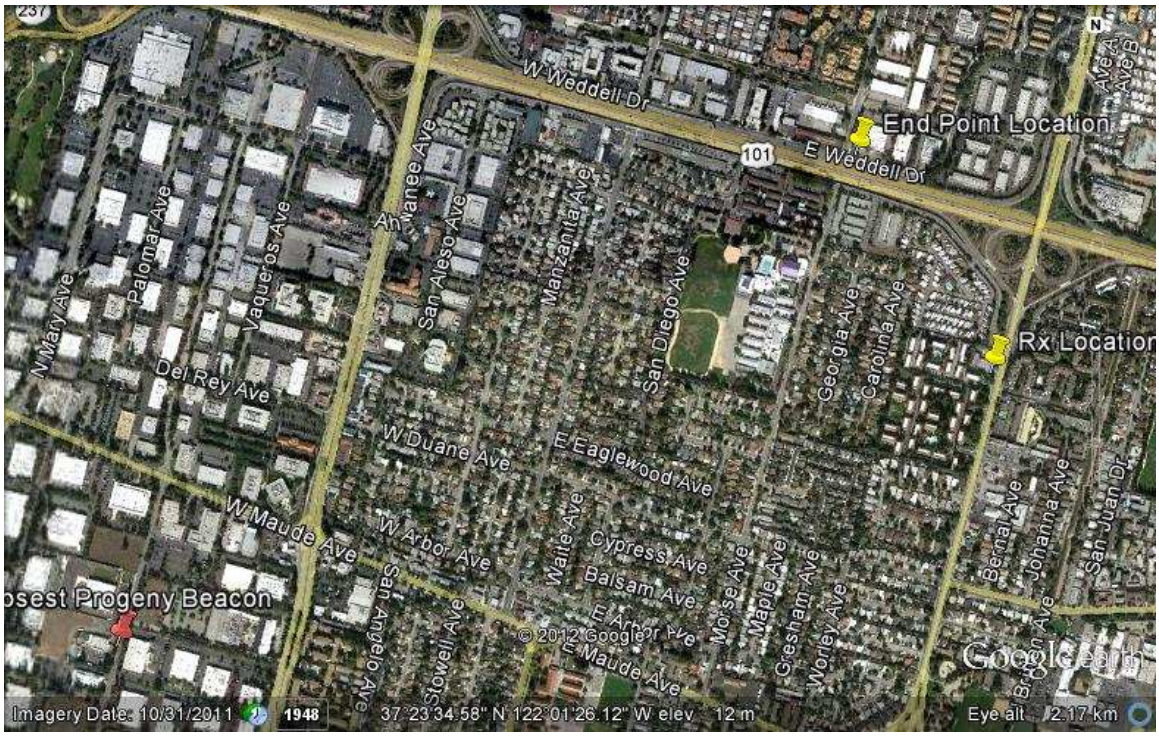
4.2 One and Two Way System Performance Test Locations

The one and two way System Performance Tests were performed at two locations chosen to represent different network environments. A third test location (no colocation, no close proximity) was not included as the parties agreed that it was unlikely to provide materially different data. The locations chosen were:

Location A: Suburban (close proximity, but no colocation)

The receiver in this location was in a suburban parking lot in Santa Clara chosen to be equally distant from three Progeny M-LMS beacons. The Progeny beacon closest to the receiver was 1.2 miles away. Using an M-LMS receiver, Progeny representatives independently and after the test verified reception of 15 M-LMS beacons at the receiver test location. In both the one way test and the two test, the End Point was located 0.35 miles from the receiver. Tests from Location A are identified in Table 5 as tests 1-2, 5-6, and 9-10.

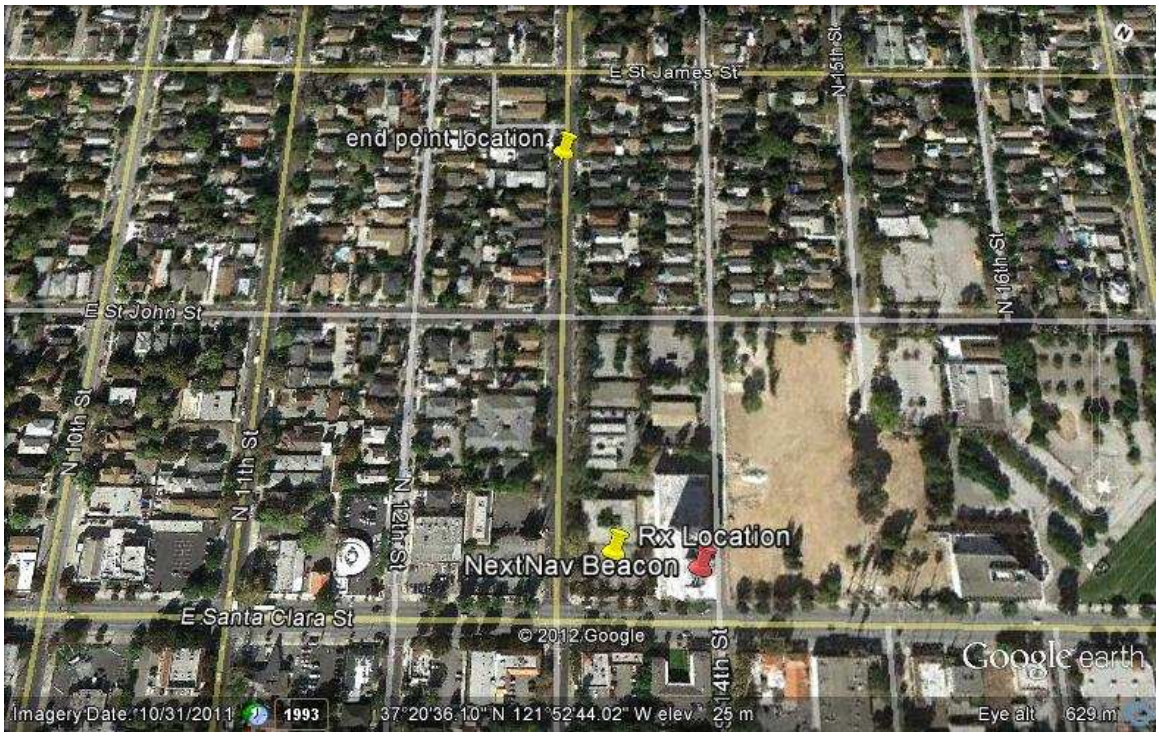
Location A: Near Fair Oaks at CA 101



Location B: Urban (colocation and close proximity)

The receiver in this location was in a parking lot in downtown San Jose directly adjacent to one Progeny M-LMS beacon with three additional M-LMS beacons at 0.86, 0.93, and 1.03 miles from the Receiver. Using an M-LMS receiver, Progeny representatives independently and after the test verified reception of 11 M-LMS beacons at the receiver test location. In both the one way test and the two way test, the End Point was located .17 miles from the receiver. Tests from Location B are identified in Table 5 as tests 2-3, 7-8, and 11-12.

Location B: Near 13th and E. Santa Clara St.



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5. Test Data Documentation

In each of the test configurations, both parties participated in establishing the test set up, documenting the equipment identifications and locations, and monitoring the test instruments and equipment. Landis+Gyr was responsible for collection and tabulation of the raw data results, which were then annotated with the appropriate test case information and shared with Progeny. Test templates (see Table 1 below) were created to denote which test configurations were completed and which test case number was assigned to each set of test results.
Table 2 represents the results for all the link tests with One way DSSS equipment.
Table 3 represents the results for all the link tests with Two way FHSS equipment.
Table 4 represents the computation of the link performance for the first attempt at transmitting a packet with the FHSS system. (If the first attempt failed, new attempts will be implemented by the Two way protocol itself to transfer the packets)
Table 5 represents the results of the RF Characterization tests

Table 1: Test cases and Test Numbers

Test 1	**0ne-Way**	**917.4 MHz**	**Fair Oaks at 101**	**All Beacons OFF**	**DSSS**
Test 2	**0ne-Way**	**917.4 MHz**	**Fair Oaks at 101**	**All Beacons ON**	**DSSS**
Test 3	**0ne-Way**	**917.4 MHz**	**13th & E Santa Clara**	**All Beacons OFF**	**DSSS**
Test 4	**0ne-Way**	**917.4 MHz**	**13th & E Santa Clara**	**All Beacons ON**	**DSSS**
Test 5	**Two way**	**904-928 MHz**	**Fair Oaks at 101**	**All Beacons OFF**	**FHSS Narrow**
Test 6	**Two way**	**904-928 MHz**	**Fair Oaks at 101**	**All Beacons ON**	**FHSS Narrow**

Test 7	**Two way**	**904-928 MHz**	**13th & E Santa Clara**	**All Beacons OFF**	**FHSS Narrow**
Test 8	**Two way**	**904-928 MHz**	**13th & E Santa Clara**	**All Beacons ON**	**FHSS Narrow**
Test 9	**Two way**	**904-928 MHz**	**Fair Oaks at 101**	**All Beacons OFF**	**FHSS Wide**
Test 10	**Two way**	**904-928 MHz**	**Fair Oaks at 101**	**All Beacons ON**	**FHSS Wide**
Test 11	**Two way**	**904-928 MHz**	**13th & E Santa Clara**	**All Beacons OFF**	**FHSS Wide**
Test 12	**Two way**	**904-928 MHz**	**13th & E Santa Clara**	**All Beacons ON**	**FHSS Wide**
Test 13	**RF Characterization**	**911 MHz**	**Embassy Suites colo**	**All Beacons ON**	**DSSS**
Test 14	**RF Characterization**	**911 MHz**	**Embassy Suites colo**	**All Beacons OFF**	**DSSS**
Test 15	**RF Characterization**	**911 MHz**	**Embassy Suites colo**	**Embassy only ON**	**DSSS**
Test 16	**RF Characterization**	**917 MHz**	**Embassy Suites colo**	**All Beacons ON**	**DSSS**
Test 17	**RF Characterization**	**917 MHz**	**Embassy Suites colo**	**All Beacons OFF**	**DSSS**
Test 18	**RF Characterization**	**917 MHz**	**Embassy Suites colo**	**Embassy only ON**	**DSSS**
Test 19	**RF Characterization**	**911 MHz**	**1 mile from Embassy Suites**	**All Beacons OFF**	**DSSS**

Test20	**RF Characterization**	**911 MHz**	**1 mile from Embassy Suites**	**Embassy only ON**	**DSSS**
Test 21	**RF Characterization**	**917 MHz**	**1 mile from Embassy Suites**	**All Beacons OFF**	**DSSS**
Test 22	**RF Characterization**	**917 MHz**	**1 mile from Embassy Suites**	**Embassy only ON**	**DSSS**
Test 23	**RF Characterization**	**911 MHz**	**5 miles from Embassy Suites**	**All Beacons OFF**	**DSSS**
Test 24	**RF Characterization**	**911 MHz**	**5 miles from Embassy Suites**	**Embassy only ON**	**DSSS**
Test 25	**RF Characterization**	**917 MHz**	**5 miles from Embassy Suites**	**All Beacons OFF**	**DSSS**
Test 26	**RF Characterization**	**917 MHz**	**5 miles from Embassy Suites**	**Embassy only ON**	**DSSS**

6. Test Results

The following tables contain the formatted data resulting from the multiple test configurations described in this document. The one way and two way test tables show the data performance of the system based upon the Packet Success Rate noted in each of the tests.

The RF characterization test graphs are graphical representations of the raw data collected. These tests generated a "snapshot" of the 911 MHz or 917 MHz channel every 2 seconds, and the graphs show the time dispersion of the channel noise as

seen through the One way receiver, during the measurement period in either the 911 MHz or 917 MHz channel under study.

Table 2: One way Equipment Test Results

Test Number	Test Configuration	Packets Received	Packets Sent	Packet Success Rate %
Test 1	Beacons OFF			
Test 2	Beacons ON			
Change				-1.4%
Test 3	Beacons OFF			
Test 4	Beacons ON			
Change				+5.6%

Table 3: Two Way Equipment Test Results: Total Packet Success Rate

Test Number	**Test Configuration**	**Time Span of Test**	**Total Transmitted Packets**	**Total Packets Received**	**Packet Success Rate %**
Test 5	Location A Beacon OFF Narrow Band	0:18:03			
Test 6	Location A Beacon ON Narrow Band	0:19:42			
Change					+0.31%
Test 7	Location A Beacon OFF Wide Band	0:17:00			
Test 8	Location A Beacon ON Wide Band	0:18:48			
Change					-0.85%
Test 9	Location B Beacon OFF Narrow Band	0:17:12			
Test 10	Location B Beacon ON Narrow Band	0:16:52			
Change					-0.01%
Test 11	Location B Beacon OFF Wide Band	0:17:02			
Test 12	Location B Beacon ON Wide Band	0:18:40			
Change					+0.05%

Table 4: Two way Equipment Test Results: First-Packet Success Rate

Test Number	Test Configuration	Progeny System Status	First Attempt Success Rate
Test 5	240 channels, 100KHz spacing Link distance 0.3mile, radio 1: 25 feet AGL, radio 2: to 4 feet AGL,	OFF	
Test 6	240 channels, 100KHz spacing Link distance 0.3mile, radio 1: 25 feet AGL, radio 2: to 4 feet AGL	ON	
Change			-5.5%
Test 7	86 channels, 300KHz spacing Link distance 0.2mile, radio 1: 25 feet AGL, radio 2: to 4 feet AGL	OFF	* Note 1
Test 8	86 channels, 300KHz spacing Link distance 0.2mile, radio 1: 25 feet AGL, radio 2: to 4 feet AGL	ON	* Note 1
Change			* Note 1
Test 9	240 channels, 100KHz spacing Link distance 0.3 mile, radio 1: 25 feet AGL, radio 2: to 4 feet AGL	OFF	
Test 10	240 channels, 100KHz spacing Link distance 0.3 mile, radio 1: 25 feet AGL, radio 2: to 4 feet AGL	ON	
Change			-5.8%

Test 11	86 channels, 300KHz spacing Link distance 0.2mile, radio 1: 25 feet AGL, radio 2: to 4 feet AGL	OFF	
Test 12	86 channels, 300KHz spacing Link distance 0.2mile, radio 1: 25 feet AGL, radio 2: to 4 feet AGL	ON	
Change			-7.4%

* Note 1: Data for Wideband channeling with beacons ON was not logged with the correct time resolution so this calculation is not possible to make.

RF Characterization Tests

Test Summary

Table 5 contains summary information from the RF Characterization tests. This table is followed by graphical representations of the raw collected data.

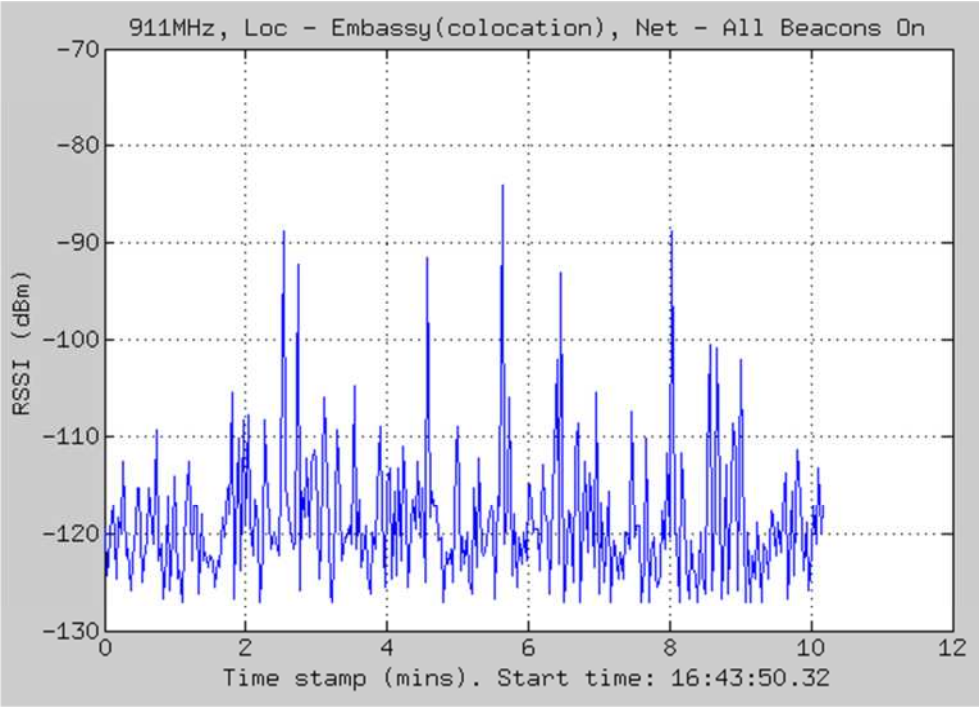
Table 5: RF noise characterization tests

Test Number	EUT Operating Frequency	Progeny System Status	LogAverage [dBm, Count]
Test 13: Embassy Colo	Center Frequency: 911MHz	All Beacons ON	**-119. 21**
Test 14: Embassy Colo	Center Frequency: 911MHz	All Beacons OFF	**-119. 21**
Noise change			0.0 dB
Test 15: Embassy Colo	Center Frequency: 917 MHz	All Beacons ON	**-113. 36**
Test 16: Embassy Colo	Center Frequency: 917 MHz	All Beacons OFF	**-114. 34**
Noise change			-0.98 dB

Test 17: Embassy Colo	Center Frequency: 917 MHz	All Beacons OFF	**-114. 34**
Test 18: Embassy Colo	Center Frequency: 917 MHz	Embassy only ON	**-113. 35**
Noise Change			+0.99 dB
Test 19: Embassy Colo	Center Frequency: 911MHz	All Beacons OFF	**-119. 21**
Test 20: Embassy Colo	Center Frequency: 911MHz	Embassy only ON	**-119. 19**
Noise Change			+0.02 dB
Test 21: 1 Mile from Embassy	Center Frequency: 917 MHz	All Beacons OFF	**-113. 36**
Test 22: 1 Mile from Embassy	Center Frequency: 917 MHz	Embassy only ON	**-112. 37**
Noise Change			+0.99
Test 23: 1 Mile from Embassy	Center Frequency: 911MHz	All Beacons OFF	**-121. 16**
Test 24: 1 Mile from Embassy	Center Frequency: 911MHz	Embassy only ON	**-120.17**
Noise Change			+0.99 dB
Test 25: 5 Mile from Embassy	Center Frequency: 917 MHz	All Beacons OFF	**-117. 27**
Test 26: 5 Mile from Embassy	Center Frequency: 917 MHz	Embassy only ON	**-115. 30**
Noise Change			+1.97 dB
Test 25: 5 Mile from Embassy	Center Frequency: 911MHz	All Beacons OFF	**-121. 16**
Test 26: 5 Mile from Embassy	Center Frequency: 911MHz	Embassy only ON	**-120.17**
Noise Change			+0.99 dB

RF Characterization Graphical Display of Raw Data

Test 13



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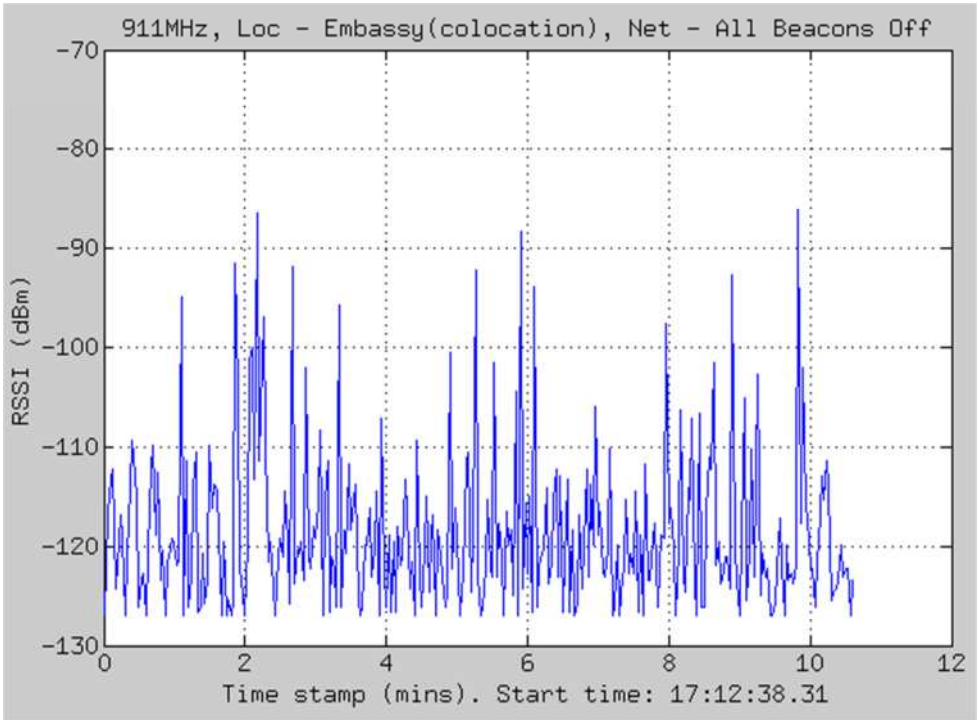
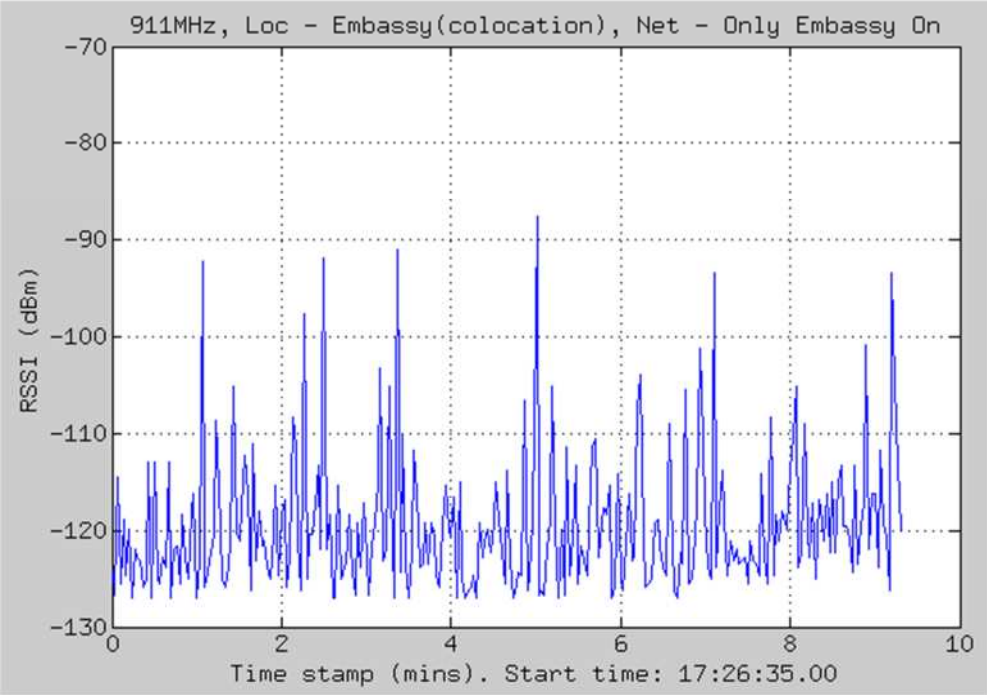


Test 15



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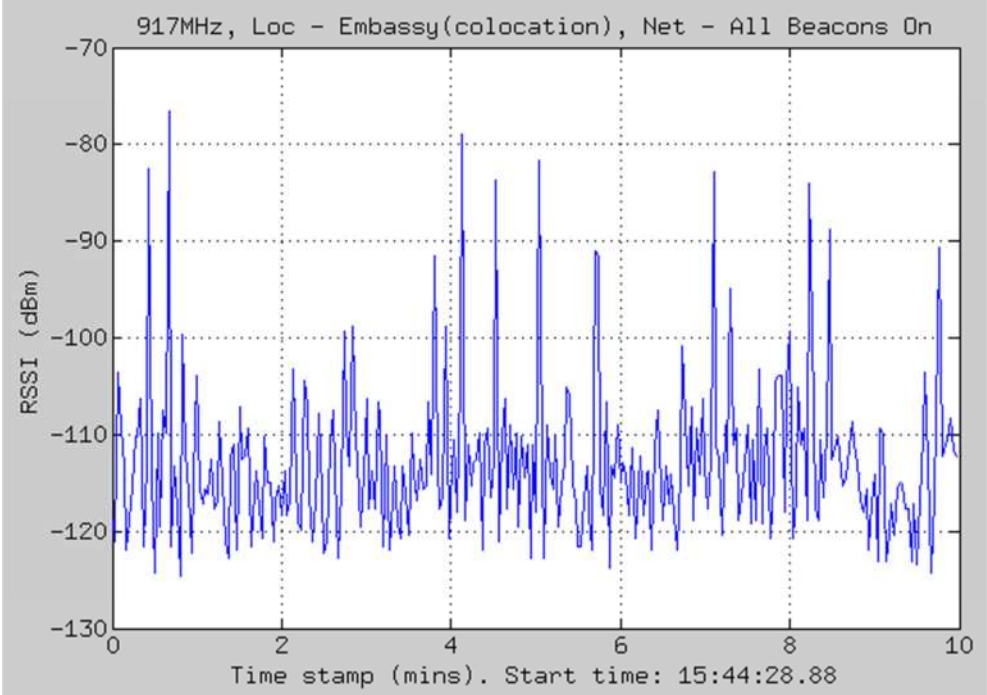

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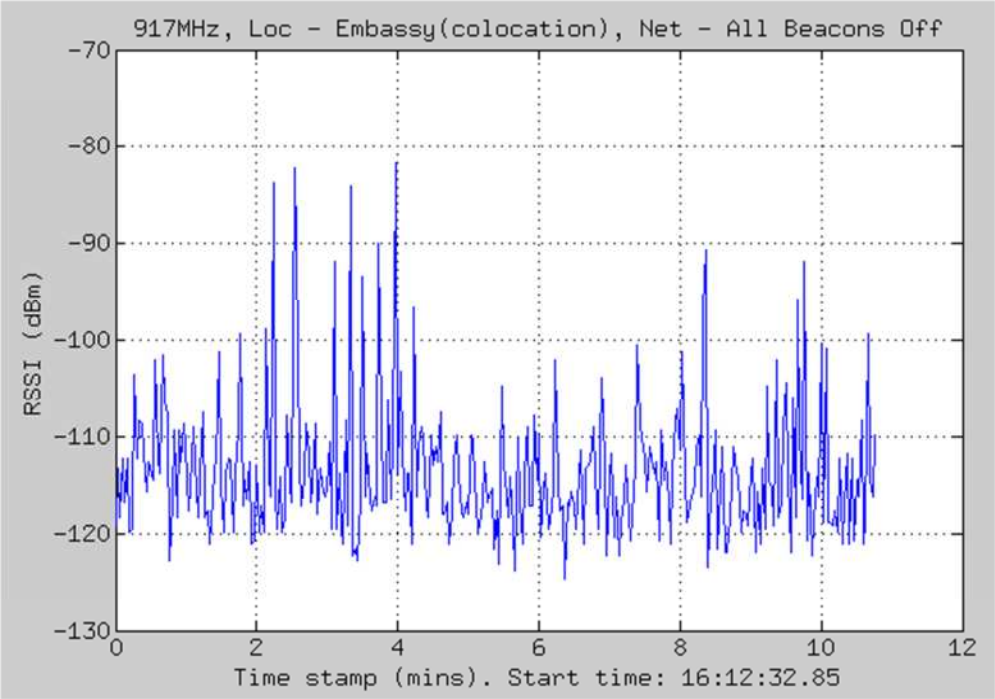
Test 17



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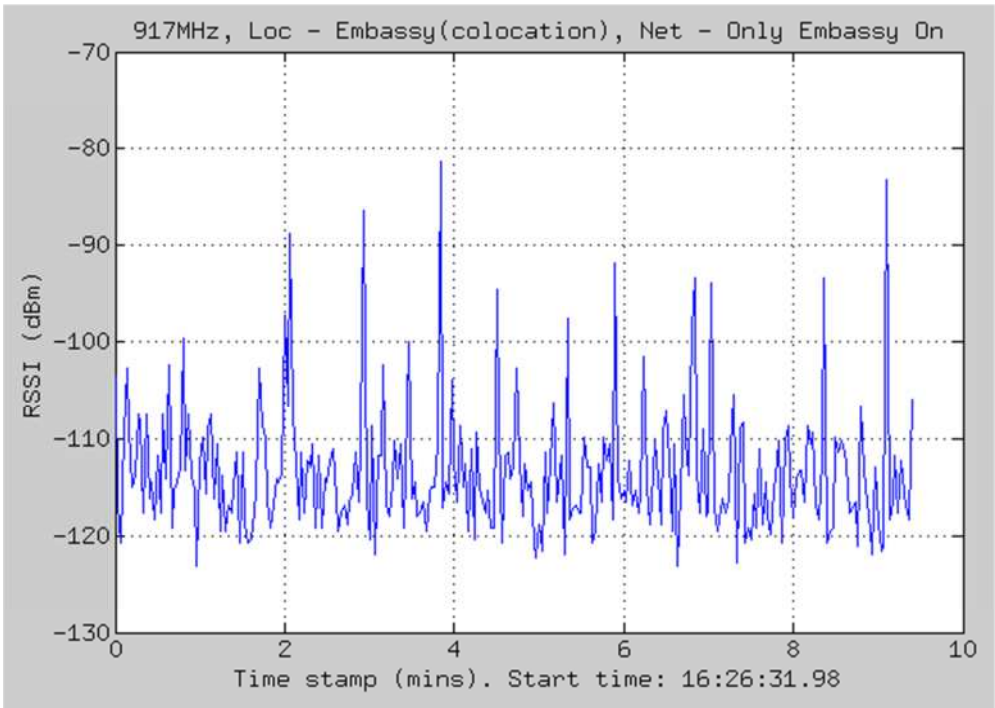

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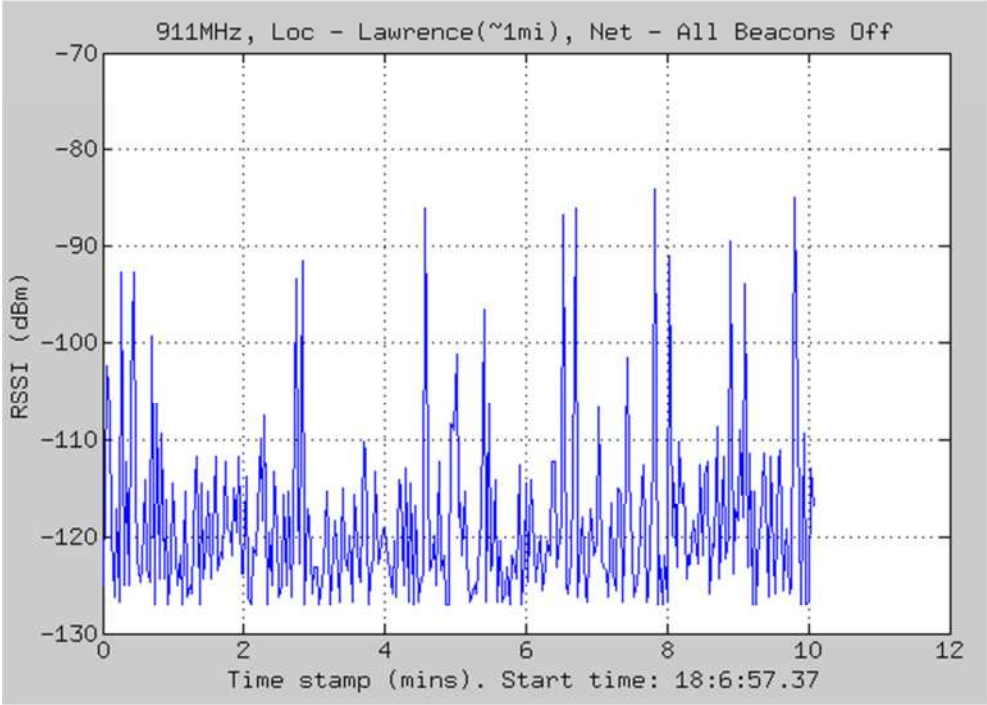

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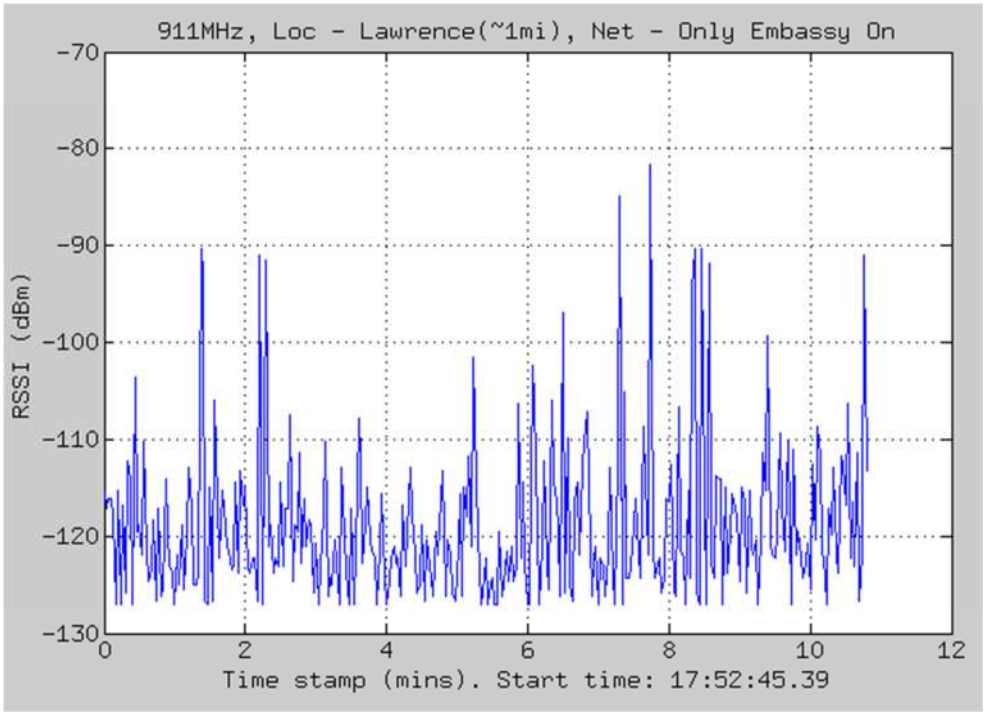

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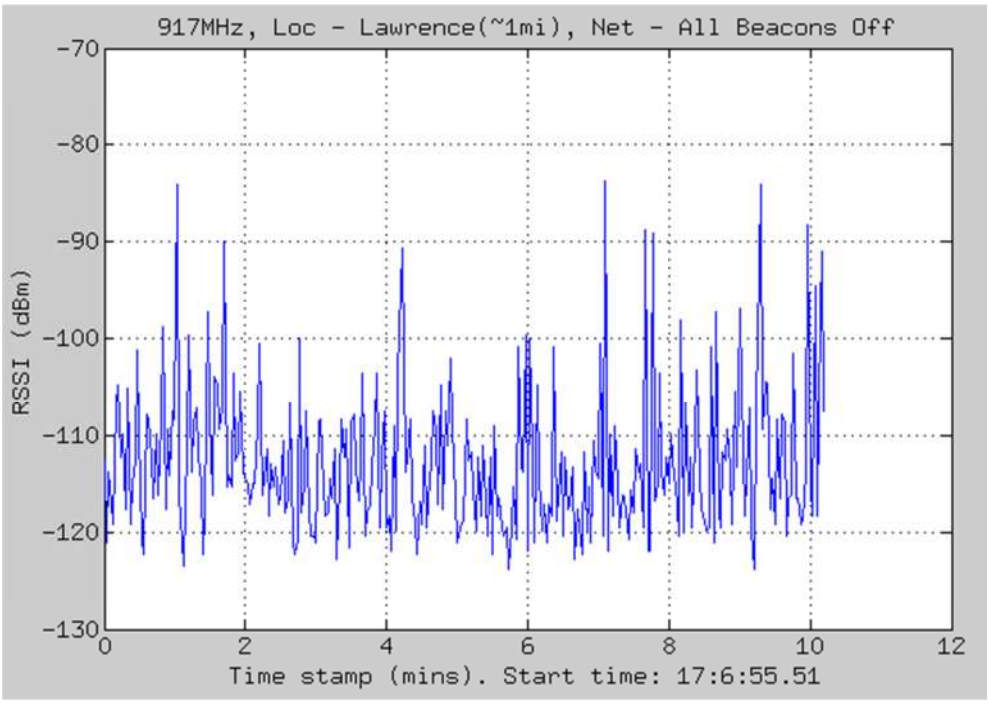

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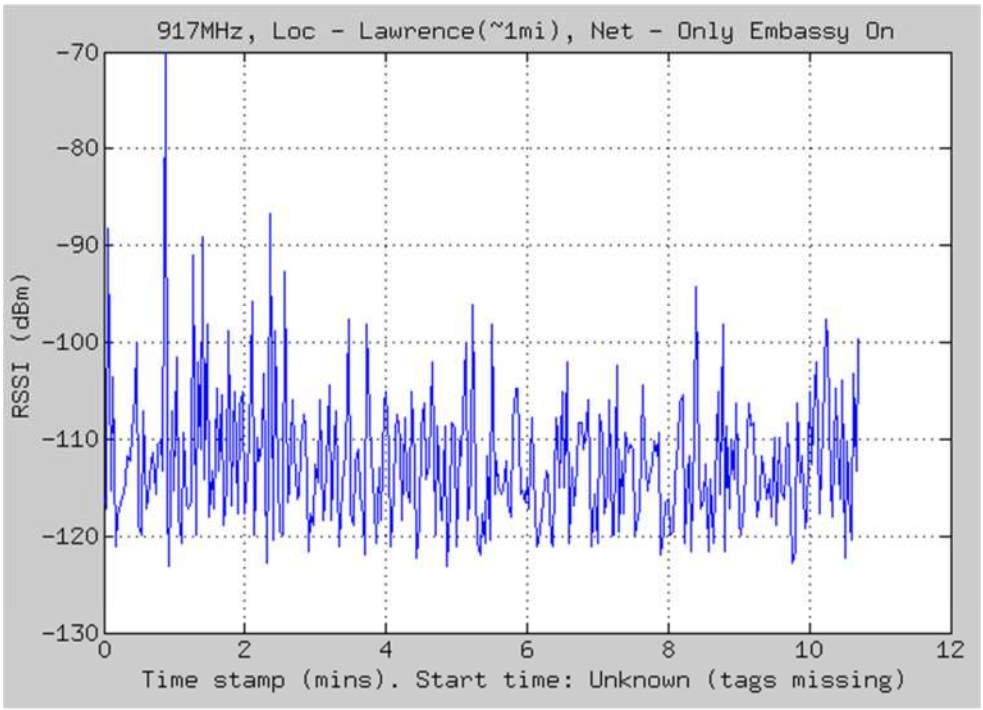
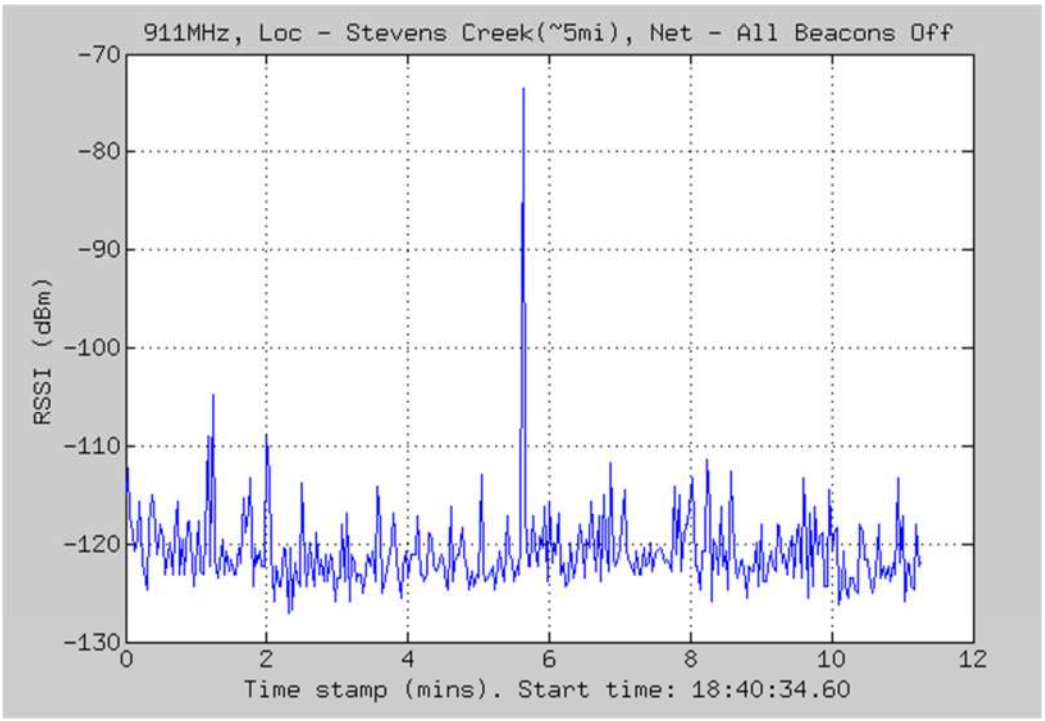
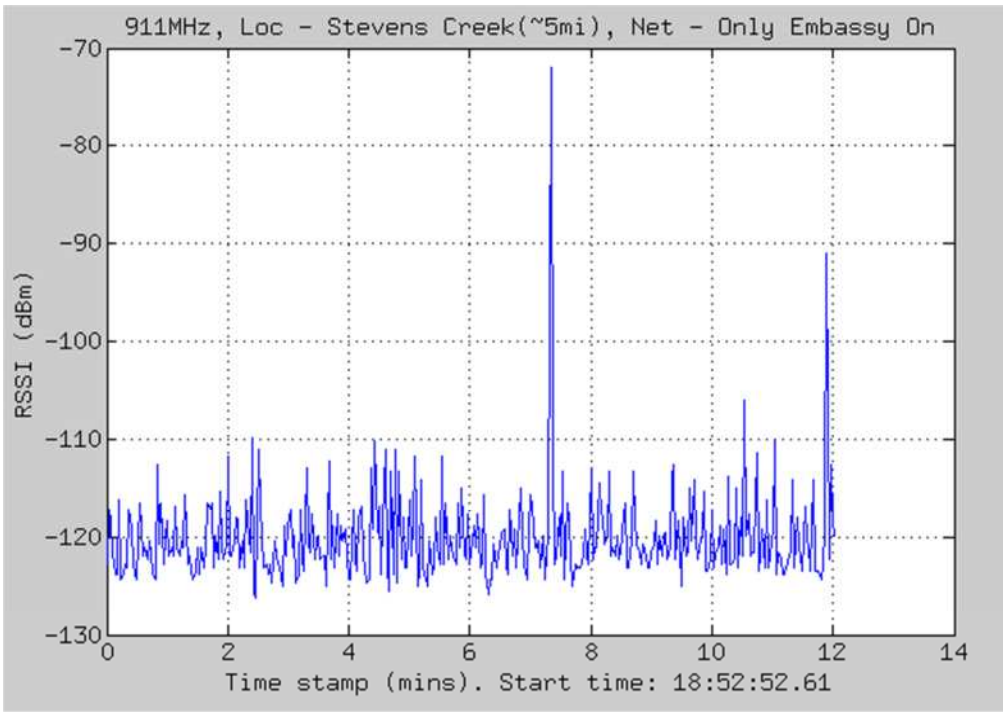


Test 23



Test 24



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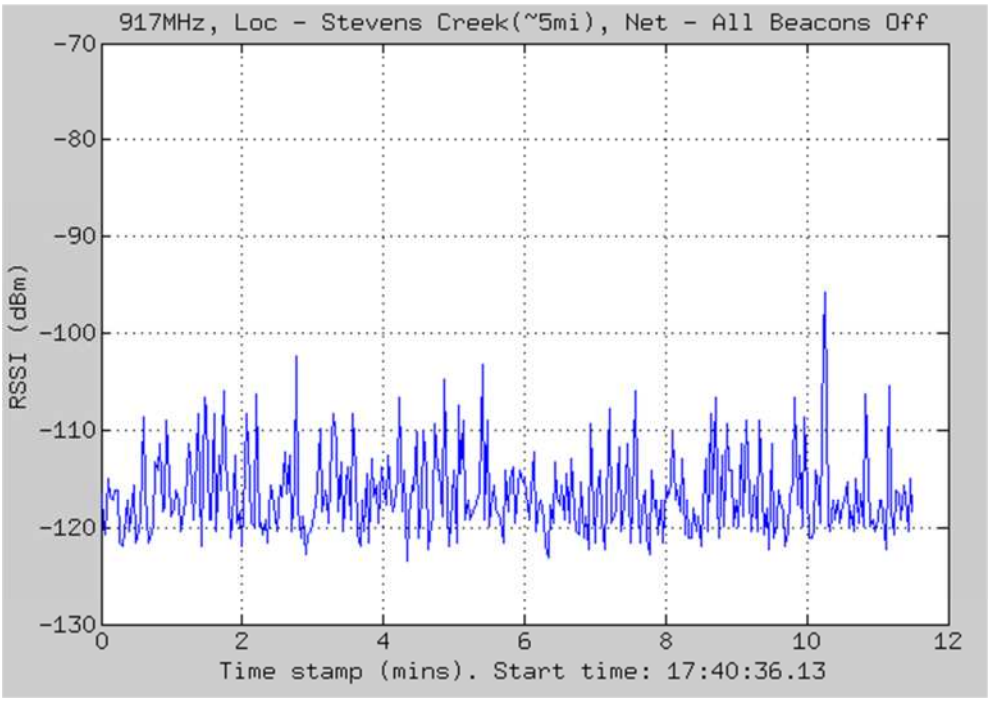
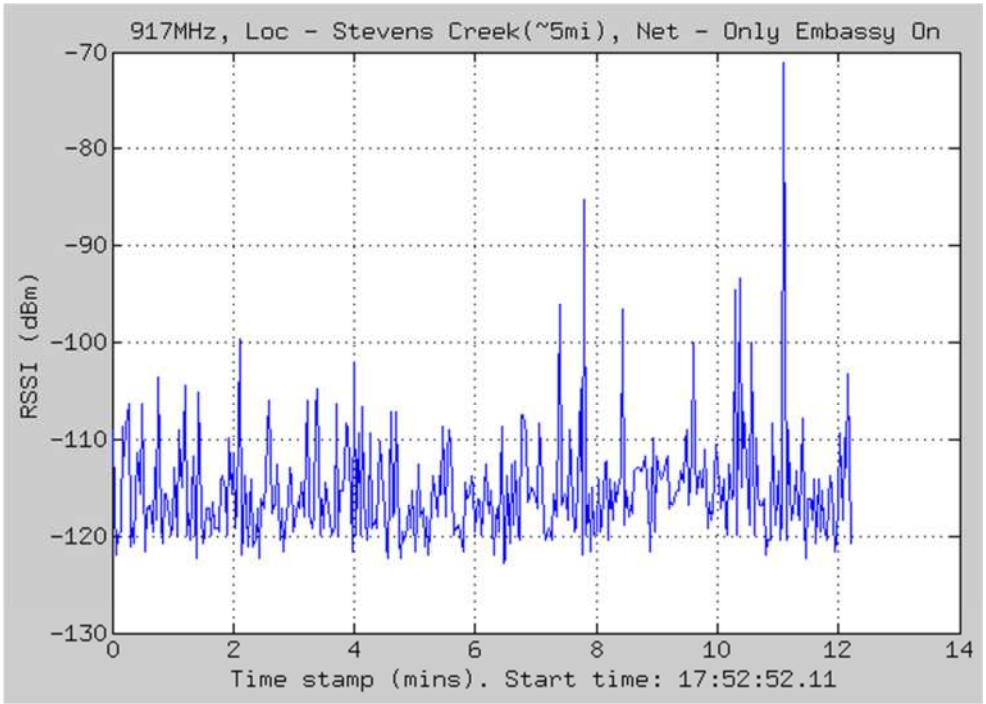
Test 25



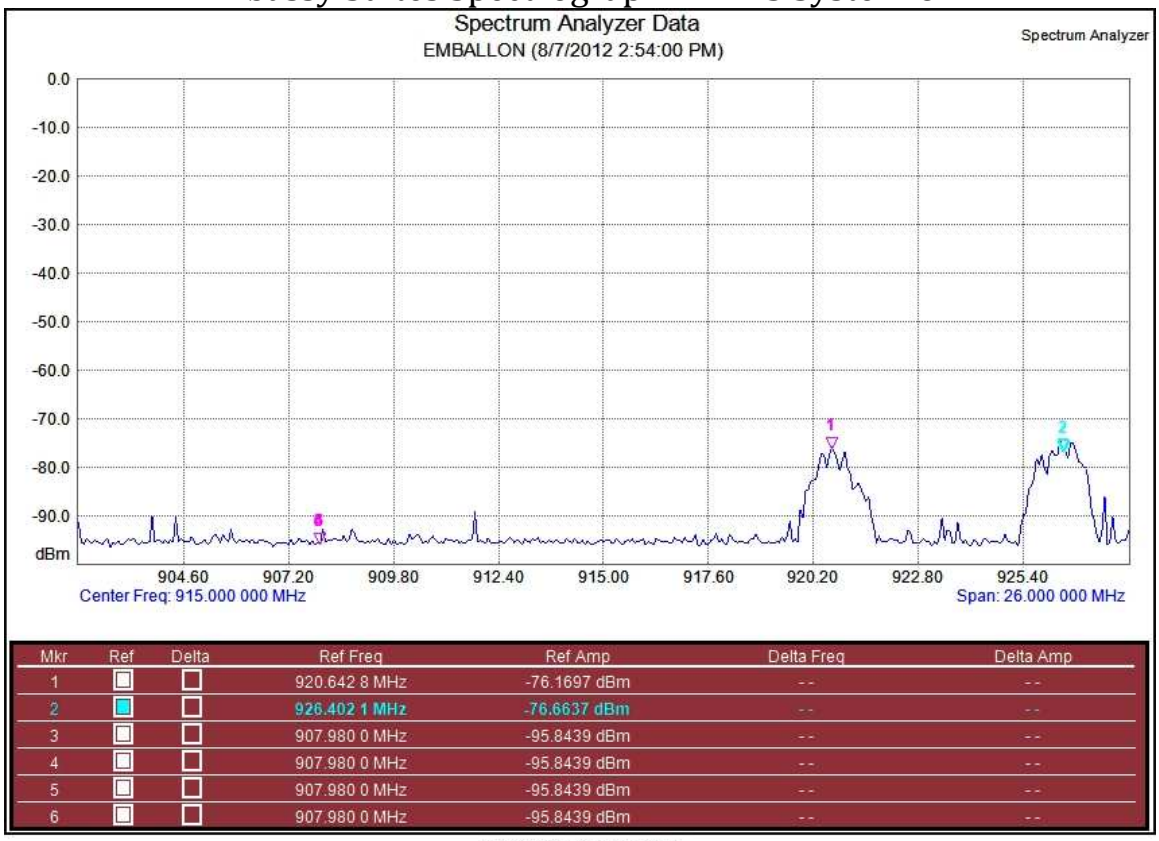
Test 26



Spectrum Analyzer Captures

A Spectrum Analyzer data capture was done at several sites in order to show the Spectral and Time occupancy of operating beacons. The Spectrograph plots show the spectral occupancy of the M-LMS beacons. The Zero Span plots show the temporal occupancy of the M-LMS beacons.

Embassy Suites Spectrograph M-LMS System ON

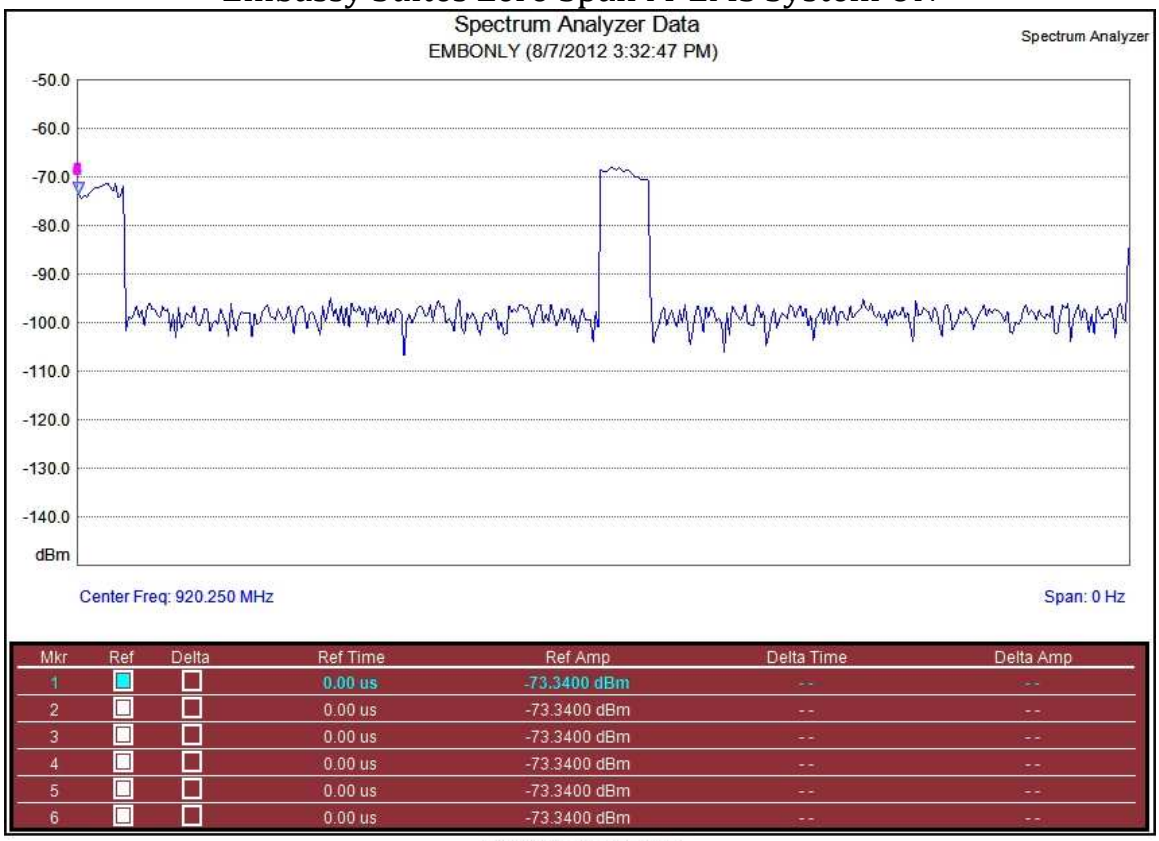


Mkr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	☐	☐	920.642 8 MHz	-76.1697 dBm	--	--
2	☐	☐	926.402 1 MHz	-76.6637 dBm	--	--
3	☐	☐	907.980 0 MHz	-95.8439 dBm	--	--
4	☐	☐	907.980 0 MHz	-95.8439 dBm	--	--
5	☐	☐	907.980 0 MHz	-95.8439 dBm	--	--
6	☐	☐	907.980 0 MHz	-95.8439 dBm	--	--

Measurement Parameters

Trace Mode	Max Hold	Start Frequency	902.000 000 MHz
Preamp	OFF	Stop Frequency	928.000 000 MHz
Min Sweep Time	--	Frequency Span	26.000 000 MHz
Reference Level Offset	0.0 dB	Reference Level	0.000 dBm
Input Attenuation	5.0 dB	Scale	10.0 dB/div
RBW	30.0 kHz	Serial Number	409173
VBW	10.0 kHz	Firmware Version	V5.32
Detection	Peak	Date	8/7/2012 2:54:00 PM
Center Frequency	915.000 000 MHz	Device Name	S332D

Embassy Suites Zero Span M-LMS System ON

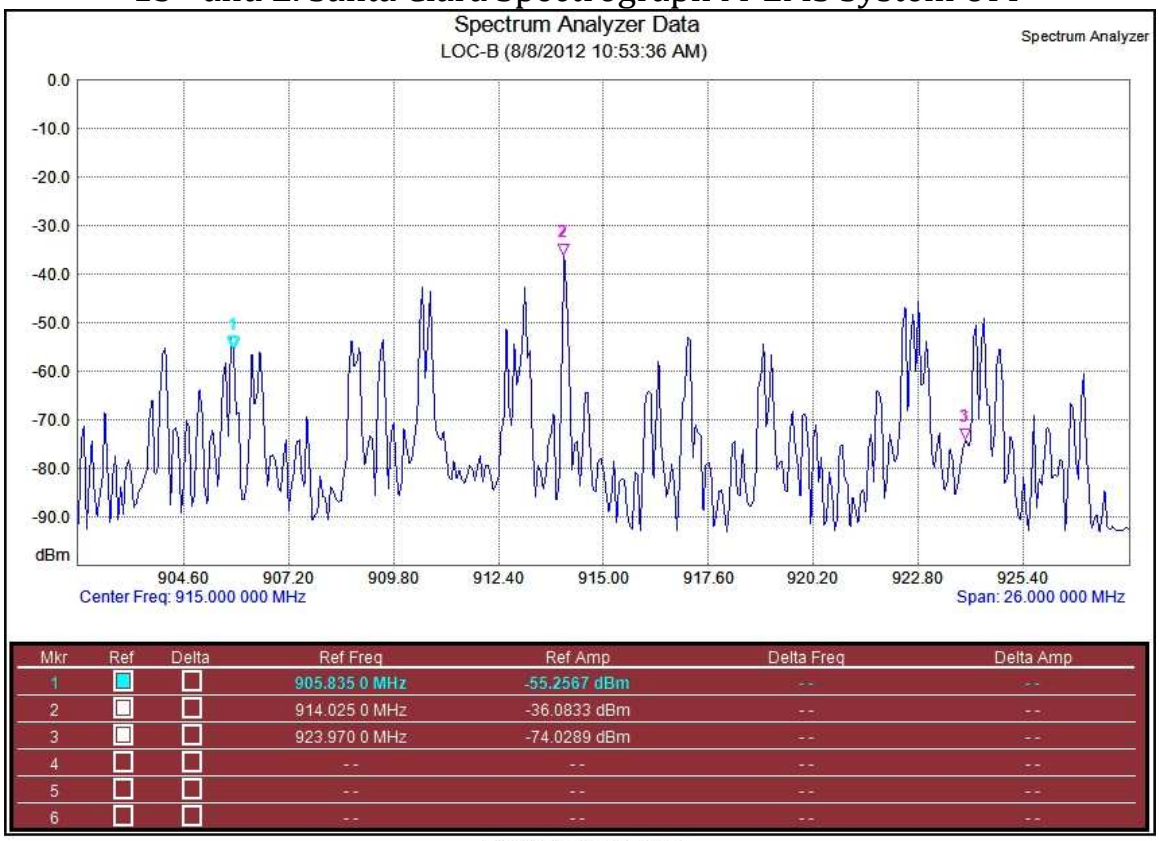


Mkr	Ref	Delta	Ref Time	Ref Amp	Delta Time	Delta Amp
1			0.00 us	-73.3400 dBm	--	--
2			0.00 us	-73.3400 dBm	--	--
3			0.00 us	-73.3400 dBm	--	--
4			0.00 us	-73.3400 dBm	--	--
5			0.00 us	-73.3400 dBm	--	--
6			0.00 us	-73.3400 dBm	--	--

Measurement Parameters

Trace Mode	Average	Start Frequency	920.250 000 MHz
Trace Average	1	Stop Frequency	920.250 000 MHz
Preamp	OFF	Frequency Span	0.000 000 Hz
Min Sweep Time	--	Reference Level	-50.000 dBm
Reference Level Offset	0.0 dB	Scale	10.0 dB/div
Input Attenuation	0.0 dB	Serial Number	409173
RBW	1.0 MHz	Firmware Version	V5.32
VBW	300.0 kHz	Date	8/7/2012 3:32:47 PM
Detection	Peak	Device Name	S332D
Center Frequency	920.250 000 MHz		

13th and E. Santa Clara Spectrograph M-LMS System OFF



Mkr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	☐	☐	905.835 0 MHz	-55.2567 dBm	--	--
2	☐	☐	914.025 0 MHz	-36.0833 dBm	--	--
3	☐	☐	923.970 0 MHz	-74.0289 dBm	--	--
4	☐	☐	--	--	--	--
5	☐	☐	--	--	--	--
6	☐	☐	--	--	--	--

Measurement Parameters

Trace Mode	Max Hold	Start Frequency	902.000 000 MHz
Preamp	OFF	Stop Frequency	928.000 000 MHz
Min Sweep Time	--	Frequency Span	26.000 000 MHz
Reference Level Offset	0.0 dB	Reference Level	0.000 dBm
Input Attenuation	0.0 dB	Scale	10.0 dB/div
RBW	30.0 kHz	Serial Number	409173
VBW	10.0 kHz	Firmware Version	V5.32
Detection	Peak	Date	8/8/2012 10:53:36 AM
Center Frequency	915.000 000 MHz	Device Name	S332D

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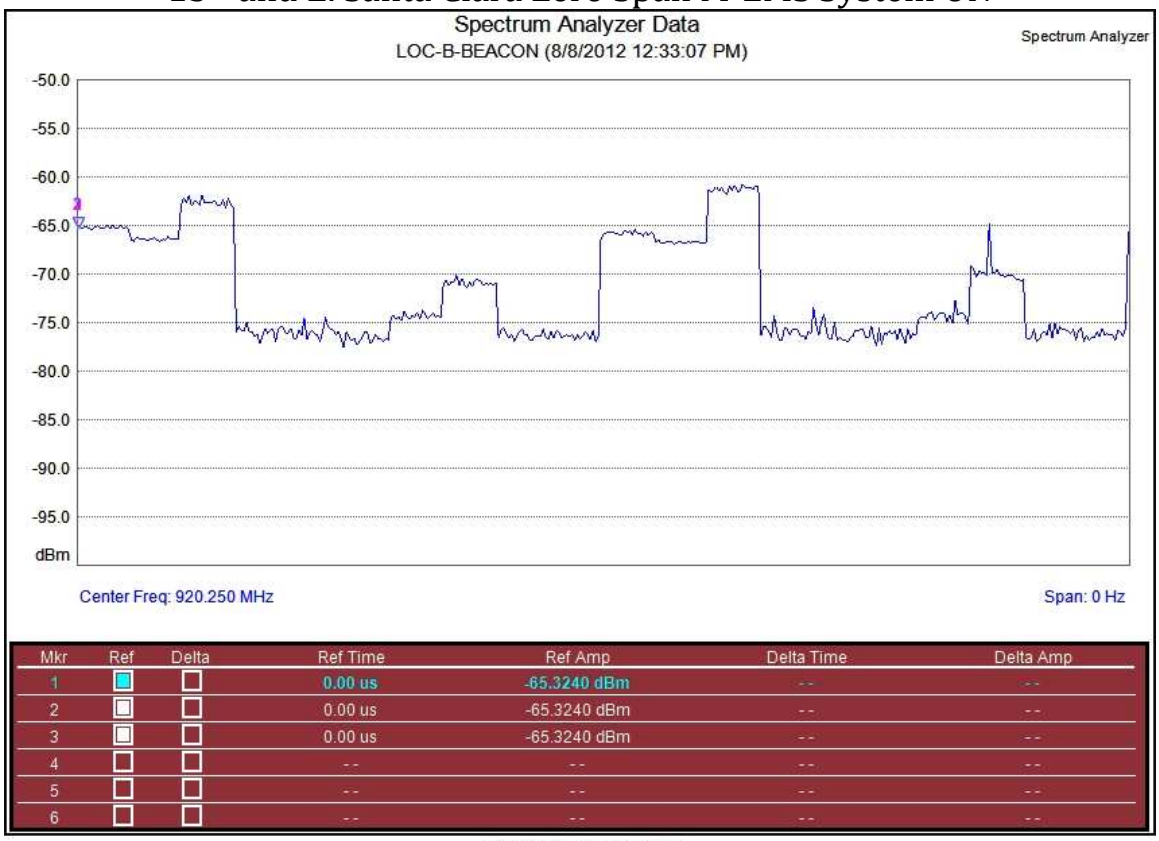
13th and E. Santa Clara Zero Span M-LMS System ON



Mkr	Ref	Delta	Ref Time	Ref Amp	Delta Time	Delta Amp
1	☐	☐	0.00 us	-65.3240 dBm	--	--
2	☐	☐	0.00 us	-65.3240 dBm	--	--
3	☐	☐	0.00 us	-65.3240 dBm	--	--
4	☐	☐	--	--	--	--
5	☐	☐	--	--	--	--
6	☐	☐	--	--	--	--

Measurement Parameters

Trace Mode	Average	Start Frequency	920.250 000 MHz
Trace Average	1	Stop Frequency	920.250 000 MHz
Preamp	OFF	Frequency Span	0.000 000 Hz
Min Sweep Time	--	Reference Level	-50.000 dBm
Reference Level Offset	0.0 dB	Scale	5.0 dB/div
Input Attenuation	0.0 dB	Serial Number	409173
RBW	1.0 MHz	Firmware Version	V5.32
VBW	300.0 kHz	Date	8/8/2012 12:33:07 PM
Detection	Peak	Device Name	S332D
Center Frequency	920.250 000 MHz		

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7. Appendix

Pictures of locations and equipment:

Embassy Suites Colocated RF characterization test location

1 Mile distant RF characterization test location

5 Mile distant RF characterization test location

Fair Oaks at 101 Receiver location for one and two way tests

Fair Oaks at 101 Remote location for one and two way tests

13th and E Santa Clara San Jose Receiver location for one and two way tests

13th and E Santa Clara San Jose Remote location for one and two way tests

Landis+Gyr Test Receiver

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Landis+Gyr Two-Way Transceiver

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